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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/467,530	12/20/1999	PETER J. DANISH	VAL-458-A	2507

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EXAMINER

PEREZ, GUILLERMO

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/467,530

Applicant(s)

DANISH ET AL.

Examiner

Guillermo Perez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15-18 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments of the rejection of the last Office action are persuasive and, therefore, the rejections of that action are withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito (U. S. Pat. 4,321,748).

Referring to claim 6, Ito discloses a motor/gear drive having:

a shaft (4) with a worm gear (10) carried thereon and a free tip end portion with an outer diameter terminating in an end wall (42),

a housing (9) having a bore (93) formed coaxial with respect to the shaft (4) to be installed therein,

a plastic thrust member (13) within the bore (93) of the housing (9) disposed to be in coaxial registry with the end wall (42) of the shaft (4) to be installed, and operable to be in engagement with the end wall (42) of the shaft (4) to be installed to prevent axial movement of the shaft (4).

Referring to claim 7, Ito discloses that the thrust member (13) is an injection molded thrust member formed in situ (figure 3) within the bore (93) of the housing (9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 16-17, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giandinoto et al. (U. S. Pat. 3,848,477) in view of Oyafuso (U. S. Pat. 5,144,738).

Giandinoto et al. disclose a motor/gear drive having:

- a shaft with a worm gear (R1) carried thereon and a free tip end portion (10) with an outer diameter terminating in an end wall (16), and
- a housing (R5) having a bore (20) formed coaxial with respect to the shaft to be installed therein,
- an annular sleeve (14) within the bore (20) of the housing (R5) concentrically disposed to be positioned about the outer diameter of the tip end portion (10) of the shaft to be installed and to be nominally spaced radially from the outer diameter of the tip end portion (10), and wherein
- the sleeve (14) is operable to support and engage the outer diameter of the tip end portion (10) of the shaft only in response to

radial loads acting to deflect the shaft into contact with the annular sleeve (14 and column 2, lines 35-38).

Giandinoto et al. disclose that the sleeve (14) have a bore (12) extending through there, the bore (12) have an inner diameter larger than the outer diameter of the tip end portion (10) of the shaft to be installed.

Giandinoto et al. disclose a thrust member (18) within the bore (20) of the housing (R5) disposed to be in coaxial registry with the end wall (16) of the shaft to be installed, and operable to be in engagement with the end wall (16) of the shaft to be installed to prevent axial movement of the shaft. Giandinoto et al. disclose that the bore (20 in figure 3) has a first portion (20a) of a first diameter and an axially endmost, coaxial, second portion (44) of a smaller diameter, a shoulder (30a) formed between the first and second portions, and a first gate (where spring 36 is located) formed in the housing (R5) communicating with the first portion (20a).

Regarding claim 17, Giandinoto et al. disclose a motor/gear drive housing (R5) for enclosing a shaft supporting a worm gear (R1) for engagement with a pinion gear (R2), the shaft having one end connectible to a prime mover (M) and a free tip end portion (10) with an outer diameter terminating in an end wall (16), the motor/gear drive housing (R5) comprising:

at least one peripheral wall (R5) defining an enclosed area with at least one open side, at least one aperture (20) formed within the peripheral wall (R5) and engaging to encircle part of the free tip end portion (10) of the shaft to be installed; and

at least one annular sleeve (14) within the aperture (20) and having an inner diameter positioned to encircle the free tip end portion (10) of the shaft to be installed through there with at least some clearance between there, such that the annular sleeve (14) is operable to support and engage the outer diameter of the free tip end portion (10) of the shaft only in response to radial loads acting to deflect the shaft into contact with the annular sleeve (14).

Regarding claim 25, Giandinoto et al. disclose a motor/gear drive housing (R5) for enclosing a shaft supporting a worm gear (R1) for engagement with a pinion gear (R2), the shaft having one end connectible to a prime mover (M) and a free tip end portion (10) with an outer diameter terminating in an end wall (16), the housing (R5) having an aperture (20) formed coaxial with respect to the shaft to be installed therein,

at least one of a annular sleeve (14) and a thrust member (18) within the aperture (20) of the housing (R5), wherein the annular sleeve (14) is positioned to be coaxially sheathing the outer diameter of the free tip end portion (10) of the shaft to be installed and to be nominally spaced radially from the outer diameter of the free tip end portion (10), the sleeve (14) is operable to support and engage the outer diameter of the free tip end portion (10) of the shaft only in response to radial loads acting to deflect the shaft into contact with the annular sleeve (14), and wherein the thrust member (18) is positioned to be in coaxial registry with the end wall (16) of the shaft, and operable to be engaged with the end wall (16) of the shaft to prevent axial movement of the shaft.

However, Giandinoto et al. do not disclose that the sleeve is made of plastic.
Giandinoto et al. do not disclose that the sleeve is injection molded and formed in situ.

Giandinoto et al. do not disclose that the thrust member is injection molded and formed in situ. Giandinoto et al. do not disclose that the outer diameter of the tip end portion of the shaft to be installed is larger than a diameter of the thrust member engaging the end wall of the tip end portion of the shaft.

Oyafuso discloses that the sleeve (14) is made of plastic (column 1, lines 35-40). Oyafuso discloses that the sleeve (14) is injection molded (column 4, lines 21-23). Oyafuso discloses that the thrust member (14) is injection molded. Oyafuso discloses that the outer diameter of the tip end portion (13) of the shaft (12) to be installed is larger than a diameter of the thrust member (tapered inside surface) engaging the end wall of the tip end portion (13) of the shaft. The invention of Oyafuso has the purpose of providing a self-adjusting clearance for the shaft to have an end play during operation.

It would have been obvious at the time the invention was made to modify the motor/gear drive of Giandinoto et al. and provide it with the material and configuration disclosed by Oyafuso for the purpose of providing a self-adjusting clearance for the shaft to have an end play during operation.

Referring to claims 1-5, 16-17, and 25-27, no patentable weight has been given to the method of manufacturing limitations (i. e. "*formed in situ*"; "*injection molded*") since "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

2. Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giandinoto et al. in view of Oyafuso as applied to claims 5 and 17 above, and further in view of Ito (U. S. Pat. 4,321,748).

Giandinoto et al. and Oyafuso substantially teaches the claimed invention except that they do not show that the thrust member is injection molded after installing the shaft. Neither Giandinoto et al. nor Oyafuso disclose that a portion of the end wall of the shaft defines at least a portion of a chamber to receive injected plastic forming the thrust member during injection molding.

Ito discloses that the thrust member (13) is injection molded after installing the shaft (4 and column 2, lines 58-62). Ito discloses that a portion of the end wall (42) of the shaft (4) defines at least a portion of a chamber (13) to receive injected plastic (13) forming the thrust member (13) during injection molding. Ito's invention has the purpose of facilitating the installation of the thrust member into the thrust member chamber.

It would have been obvious at the time the invention was made to modify the motor/gear drive of Giandinoto et al. and Oyafuso and provide it with the shaft and chamber configuration disclosed by Ito for the purpose of facilitating the installation of the thrust member into the thrust member chamber.

Referring to claim 15, no patentable weight has been given to the method of manufacturing limitations (i. e. "*the thrust member is injection molded after the installation of the shaft*") since "even though product-by-process claims are limited by

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and defined by the process, determination of patentability is based on the product itself.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

3. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giandinoto et al. in view of Oyafuso as applied to claim 27 above, and further in view of Kikly (U. S. Pat. 5,794,326).

Giandinoto et al. and Oyafuso substantially teaches the claimed invention except that they do not show a second gate formed in the housing communicating with the second portion.

Kikly discloses a second gate (117a in figures 8-9) formed in the housing (116) communicating with the second portion (115). Kikly’s invention has the purpose of allowing escape of air, which is displaced by the injected resin.

It would have been obvious at the time the invention was made to modify the motor/gear drive of Giandinoto et al. and Oyafuso and provide it with the second gate disclosed by Kikly for the purpose of allowing escape of air, which is displaced by the injected resin.

Response to Arguments

Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the Notice of References Cited for other art disclosing the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
January 8, 2003


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